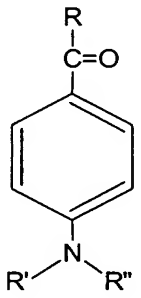
Abstract of the Disclosure

SYNTHESIS OF SOLUBLE FUNCTIONALIZED LITHIUM INITIATORS

This invention discloses a process for making dilithium initiators in high purity. This process can be conducted in the absence of amines which is desirable since amines can act as modifiers for anionic polymerizations. The dilithium compounds made are highly desirable because they are soluble in aromatic solvents. The present invention more specifically discloses a process for synthesizing a dilithium initiator which comprises reacting diisopropenylbenzene with a tertiary alkyl lithium compound in an aromatic solvent at a temperature which is within the range of about 0°C to about 100°C. The present invention further discloses a process for synthesizing m-di-(1-lithio-1-methyl-3,3-dimethylbutyl) benzene which comprises reacting diisopropenylbenzene with tertiary-butyllithium in an aromatic solvent at a temperature which is within the range of about 0°C to about 100°C. The present invention also discloses a process for synthesizing a functionalized lithium initiator which comprises reacting a dilithium initiator with an alkylaminoaryl compound of the structural formula:



wherein R, R', and R" can be the same or different, wherein R is selected from the group consisting of hydrogen atoms, alkyl groups, aryl groups, alkaryl groups, and amino aryl groups, and wherein R' and R" represent alkyl groups.